

REMARKS

The undersigned attorney would like to thank the Examiner for the courtesy of the telephonic interview which occurred on January 24, 2008 as well as the withdrawal of the Restriction requirement dated February 28, 2007. In addition, during the interview we discussed claim 7 in view of the Ciampa reference and proposed certain amendments to claim 7 which are believed to overcome the rejection in view of the Ciampa reference.

In response to the July 26, 2007 Office Action, Applicant responds to the Examiner's detailed action as follows. Claims 1-50 are pending; claims 19-23 and 27-32 are allowed; claims 11-12, 26, and 38-50 are objected to but allowable; and claims 1-10, 13-18, 24-25, and 33-37 are rejected. The Applicants acknowledge the allowance of claims 19-23 and the indication of allowability of claims 11-12, 26 and 38-50 with appreciation. Claims 18 and 44 were rejected in view of 35 U.S.C. §112 and such claims have been amended in response thereto. Independent claim 7 has been amended to add the elements of claim 8 and to clarify the inventive concept recited therein. Basis for the amendment to independent claim 7 can be found on page 25, line 20 of the patent application as originally filed. Independent claim 24 has been amended to add the elements and limitations of allowed dependent claim 26. Claims 1-6, 8, and 26 have been cancelled without prejudice.

In summary, there are three independent claims remaining in the patent application, i.e., 7, 19 and 24. Claim 7 has been amended as will be discussed below. Claim 19 has been allowed, and claim 24 has been amended to include the allowable subject matter of claim 26. Therefore, it is believed that all of the claims currently pending in the patent application are in condition for allowance.

Claim Rejections – 35 USC §112

In response to the Examiner's rejection of claims 18 and 44 as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention, Applicant has amended claim 18 replacing "data set" with "system," and claim 44 singularizing "distances." In view thereof, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 18 and 44 under 35 U.S.C. §112.

Claim Rejections – 35 USC §102

Claims 1, 2, 4-10, 13-18, 24, 25, and 33-37 were rejected under 35 U.S.C. §102(b) in view of WO 99/18732 to Ciampa. In response to the Examiner's rejection of claims 1, 2, 4-10, 13-18, 24-25, and 33-37 under 35 U.S.C. §102(b) as being anticipated by WO 99/18732 (Ciampa), Applicant respectfully disagrees. Notwithstanding Applicant's disagreement with the rejection of claims under §102(b), Applicant has hereby cancelled claims 1, 2, 4-6, and 8 without prejudice. Applicant responds to the remaining rejections as follows.

In response to the Examiner's rejection of claims 7-10, 13-18, and 33-37 under 35 U.S.C. §102(b) as being anticipated by WO 99/18732 (Ciampa), Applicant respectfully disagrees. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

With respect to claim 7, Applicant has amended claim 7 to insert the elements of claim 8 and also to further clarify the meaning of the term "tesselated ground plane". On pages 6 and 7 of the Office Action, claim 8 was rejected in view of Ciampa, and the following comments were provided in support of the rejection:

As to claim 8, Ciampa discloses the system of claim 7, further comprising a ground plane data file representing a tessellated ground plane, said ground plane data file accessible by said computer system, said ground plane data file representing a tessellated ground plane that closely approximates at least a portion of the terrain depicted within said captured oblique images (page 4, lines 4-11 and page 12, lines 5-10, wherein mosaic or tile images corresponds to a tessellated ground plane data file).

Page 4, lines 4-11 and page 12, lines 5-10 of Ciampa describe the georeferencing of each image using trigonometric processing, and also describes the use of "DEM data". The DEM data refers to the use of the Digital Elevation Model (DEM) (e.g., page 9, line 20 of Ciampa) which is used to adjust the image data for topographical variations. However, it is believed that Ciampa does not teach or suggest the invention recited in claim 7, as amended, and in particular that the Digital Elevation Model is not the tessellated ground plane required in claim 7, as amended.

That is, amended independent claim 7 recites “a computer system having a memory; an image and data file accessible by said system and including a plurality of image files corresponding to a plurality of captured oblique images, said image and data file further including positional data corresponding to said plurality of image files; a ground plane data file representing a tessellated ground plane, said ground plane data file accessible by said computer system, said ground plane data file representing a tessellated ground plane that closely approximates at least a portion of the terrain depicted within said captured oblique images, said tessellated ground plane further comprising a plurality of interconnected facets with the size of the facets defined using a uniform number of pixels in the captured oblique images; and image display and analysis software executed by said system for reading said image and data file and displaying at least a portion of the captured oblique images as a displayed oblique image, said software calculating the geo-location of one or more selected points within said displayed image, said software calculating a separation distance between any two or more selected points within said displayed image.” As will be explained below, Ciampa does not teach or even suggest a ground plane data file representing a tessellated ground plane, said ground plane data file accessible by said computer system, said ground plane data file representing a tessellated ground plane that closely approximates at least a portion of the terrain depicted within said captured oblique images, said tessellated ground plane further comprising a plurality of interconnected facets with the size of the facets defined using a uniform number of pixels in the captured oblique images.

In particular, Ciampa teaches the use of an iterative process using the Digital Elevation Model (DEM) system that provides elevation information of points being measured. (*See Ciampa*, p. 12). The DEM (Digital Elevation Model) is a rectilinear geographical grid of elevation data values that is defined on the ground, which as described below causes a changing size in an oblique image. That is, when viewed on the ground, as if painted on the ground, the geographic grid of the Digital Elevation Model appears as a series of rectangles. The Digital Elevation Model works well when used for ortho-rectified images since they are also based on a rectilinear geographic grid. However, the Digital Elevation Model does not work well when used for oblique images since they are trapezoidal rather than rectilinear. If an oblique image were taken of the

area on the ground where the DEM was painted, the result would be a set of trapezoids that merge in the distance due to natural perspective. The problem this causes is that the back (top) of an oblique image, which sees an ever wider portion of the ground, now must relate to a much larger number of DEM facets than does the front (bottom) of the oblique image. It becomes impractical for the oblique image to “carry around” this much DEM data. What makes the situation worse is that because of natural perspective, the back (top) of the oblique image contains less usable information at a coarser resolution than does the front (bottom) of the same oblique image. As a result, in an ideal situation, you would want larger DEM facets in the back (top) of the oblique image and smaller DEM facets in the front (bottom) of the oblique image.

As we discussed, the TGP (Tessellated Ground Plane) solves this problem by defining the grid in terms of a plurality of interconnected facets with the size of the facets defined using a uniform number of pixels in the captured oblique images. The Digital Elevation Model taught in Ciampa does not include a plurality of interconnected facets with the size of the facets defined using a uniform number of pixels in the captured oblique images, as recited in claim 7, as amended. The grid of the Digital Elevation Model appears as a series of rectangles having a consistent size on the ground, but a changing size, i.e., number of pixels, in the oblique image. As discussed on pages 25 and 26 of the patent application, there are a variety of advantages of defining the size of the facets using a uniform number of pixels in the captured oblique images, including providing more accurate measurements in the foreground of the displayed image, as well as a simpler location calculation.

With respect to claims 9-10, 13-18 and 33-37, Applicant respectfully requests withdrawal of the rejection of claims 9, 10, 13-18, and 33-37, because each of these claims depends either directly or indirectly from claim 7, which is distinguishable from Ciampa for the above-stated reasons.

In response to the Examiner’s rejection of claims 24 and 25 under 35 U.S.C. §102(b) as being anticipated by Ciampa, Applicant respectfully disagrees. Notwithstanding, Applicant has amended claim 24 to add the limitations of allowable claim 26, and cancelled claim 26 without prejudice.

Claim Rejections – 35 USC §103

In response to the Examiner's rejection of claim 3 as being unpatentable over Ciampa in view of U.S. Patent Number 5,894,323 (Kain), Applicant respectfully disagrees. Notwithstanding Applicant's disagreement with the rejection of claims under §103, Applicant has hereby cancelled claim 3 without prejudice.

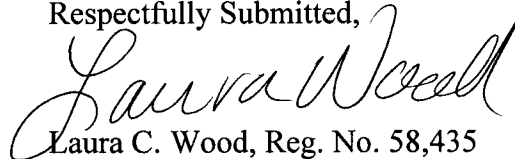
Allowable Subject Matter

Applicant appreciates the Examiner's indication that claims 11, 12, 26, and 38-50 are allowable, but objected to because they depend upon rejected claim 7. Applicant, however, respectfully requests withdrawal of the objection to these claims, because claim 7 is now in condition for allowance for the above-stated reasons.

CONCLUSION

The foregoing is intended to be a complete response to the Office Action dated July 26, 2007. Applicant respectfully requests reconsideration and withdrawal of the rejections set forth in the Office Action dated July 26, 2007. Should the Examiner have any questions or comments regarding the foregoing, or any other matter, the undersigned would welcome a telephonic interview with the Examiner.

Respectfully Submitted,



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